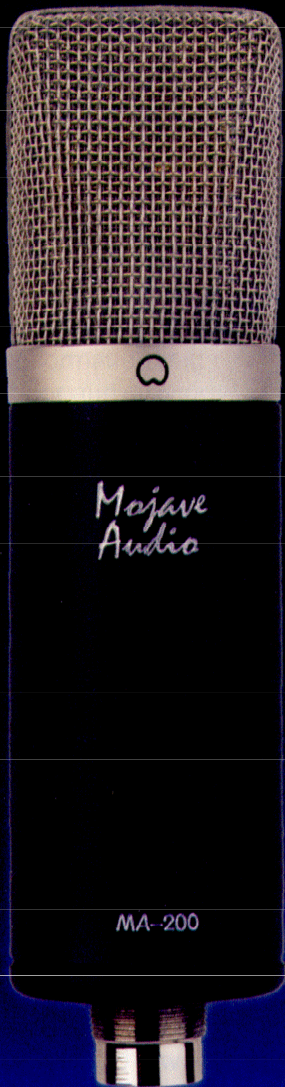


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by David Royer



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## iZ Technology

### RADAR 24 & RADAR V

I'm an analog tape guy. It's the system of recording I prefer for its sound as well as its style and workflow. That's why my studio name is Oxide Lounge Recording, and for the first year or so of being open, I didn't have a digital multitrack recorder. I'm also a businessman trying to make a living and keep the doors open and the lights on. I know I lost a few potential records due to my analog-only stance. I decided to add a digital system to the mix and considered many options before choosing RADAR. I ended up with a RADAR 24 dealer-demo directly from iZ, upgraded with Nyquist 96 kHz converters, a Session Controller remote, and a 48-channel meter bridge. I've had the unit since October 2003, using it on numerous projects, and it's worked well both as a multitrack and a mixdown deck (sometimes at the same time—more on that later). It's also allowed me to expand my business.

For those not familiar with the RADAR system, it's a stand-alone 24-track hard-disk recorder and editor (first reviewed in *Tape Op* #24). Up to eight units can be linked together (with sample-accurate lock) for a total of 192 tracks using one Session Controller. The recording engine is capable of 24-bit, 192 kHz operation. iZ offers three different sets of converters: Classic, which maxes out at 48 kHz; Nyquist 96 kHz; and S-Nyquist 192 kHz. On the RADAR 24, track counts decrease as the sampling rate goes up: 24 tracks at 48 kHz, 12 tracks at 88.2 & 96 kHz, and 6 tracks at 192 kHz. RADAR 24 users can upgrade to the Adrenaline Plus card to record 24 tracks at all sampling rates. The new RADAR V comes standard with the Adrenaline Plus card. The converters are field-upgradeable, so one can start with the Classic and later upgrade to either the Nyquist or S-Nyquist. There are three optional digital I/O configurations: ADAT, TDIF, and AES/EBU. Stereo AES/EBU and stereo SPDIF I/O come standard, as does SMPTE and MTC.

I've found the sound and usability of my RADAR 24 with Nyquist converters to be wonderful. The tone is clear and realistic, not biting or harsh as some digital recorders can be. It's a smooth and fairly transparent sound.

Recently, the nice folks at iZ sent a RADAR V S-Nyquist for me to try. On top of its ability to handle 24 channels at 192 kHz, this model also records to Broadcast Wave files natively; along with RADAR's File Flattening feature, this makes import/export to DAW pretty much a no-brainer. There's also dual-disk recording, similar to how RAID-1 disk arrays allow redundant mirroring to multiple drives. In other words, RADAR records onto two disks at once, giving you an instant backup. If one drive fails (or if you drop it on your studio floor), you'll still have your project on the second drive. And finally, there's Gigabit Ethernet for fast network transfers and file management.

My first test was doing some rough mixes for Backyard Tire Fire, an alt-country band whose third album I'm currently producing. I decided since I had the S-Nyquist machine in the room, I'd mix into it at 192 kHz. I can say that these mixes sounded closer to the consoles mix buss than mixes made with the Nyquist converters in my RADAR 24. I then did some overdubbing and mixing for a local cover band. We had started on my machine, but I was able to plug my SCSI drive right into the new unit and keep working. Even at 24/44.1, the S-Nyquist converters sounded great.

For my next project on the RADAR V, I recorded local artist Backseat Radio at 192 kHz. We multitracked "Throat", a guitar-driven pop tune with Wurlitzer, Syndrums, additional guitars, and vocals overdubbed on top of drums, bass, and rhythm guitar. Like in previous mix sessions, I was amazed by how close the S-Nyquist converters sounded to the source. Even my older Nyquist converters impart a bit of tonal change in the upper midrange that can be heard during critical listening.

RADAR editing features, based on a "tape style" system, are very extensive and easy to use. All edits are done within the Mark In and Mark Out locations, similar to marking tape with a grease pencil. All of the standard commands are available, including cut, copy, paste, move, nudge, etc. I really love the way paste can be used. After you have marked and copied the audio, you can put the machine into play and tap the Mark In key where you want the paste to be, as many times as you want. When you stop the machine, you're asked, "Paste to x times?" Hit Enter, and the pastes are performed. Or you can use Mark Out, and it will align the end of the pasted section to where you marked. This is very helpful for pastes of a more creative nature, like backward reverbs and the like. There are 99 levels of undo/redo.

It's quite easy to back up a tune to the system drive while the band is tuning and preparing for the next take. Long-term backup can be achieved through a number of options, including tape, DVD-R, DVD-RAM, or network. I personally upgraded mine to a multi-drive (DVD/CD burner) from DVD-RAM for better compatibility with my client's and my own home systems. The latest RADAR OS includes one-step backup to DVD-R and CD-R, as well as improved file management. You can even burn audio CDs from the multi-drive. Sample-rate conversion and dithering are handled internally, with three quality levels to choose from, and it's easy to burn different sequences for comparison. Quite a handy system indeed—as if iZ built a Masterlink into the RADAR.

Speaking of mixing to the RADAR, I've used it to mix high resolution 24/88.2 off of my 2" deck with great success. (My mastering engineer prefers to have 88.2 for the simple math down to 44.1 for release.) I also have tried a suggestion made to me by Dale Anaka at iZ; I mixed a project to two open tracks of the RADAR. It is a live record by Bottle of Justice. I had taken the RADAR to a local club and recorded two nights of shows. We filled 19 tracks, so I had spares for mixing. I was able to mix to tracks 23 and 24 of the same project. This allowed me to punch-in to the mix if I wanted to change something; like on one song, after a couple of listens, we decided that the guitar solo needed to be a bit louder. I adjusted the level in the automation of my console and then started the song just before the solo. I set up the auto-punch in/out for the solo section only and let the machine do its thing. I didn't have to redo the whole song, and I could undo it if we decided it was not quite right. Very cool. Since doing that record, I now keep tracks 23 and 24 open, and mix every project done on the RADAR within the machine. [I know people who did this with tape years before HDRs and DAWs were invented, although punch-in to tape isn't seamless like it is on RADAR or other HDRs and DAWs. —AHJ]

iZ often advertises that the RADAR is the digital recorder with the soul of tape. Though I do believe it has a tape feel in its function, and I believe it sounds very, very nice, it still doesn't have the inherent euphoria of tape. I still use analog tape as much as possible, for tracking and mixing, and I definitely hear and feel the difference. iZ has made a great-sounding, highly useful tool, but the ju-ju of tape still cannot be duplicated in my humble opinion. (\$7995-\$35,995; [www.izcorp.com](http://www.izcorp.com))

—Tony SanFilippo, [www.oxidelounge.com](http://www.oxidelounge.com)